

## Research

- 169 **Quantitative Proteomics of the Mitotic Chromosome Scaffold Reveals the Association of BAZ1B with Chromosomal Axes**  
Shinya Ohta, Takako Taniguchi, Nobuko Sato, Mayako Hamada, Hisaaki Taniguchi, and Juri Rappsilber
- 182 **Integrated Proteomics Reveals Apoptosis-related Mechanisms Associated with Placental Malaria**  
Rebeca Kawahara, Livia Rosa-Fernandes, Ancély Ferreira dos Santos, Carla Letícia Bandeira, Jamille G. Dombrowski, Rodrigo M. Souza, Micaella Pereira Da Fonseca, William T. Festuccia, Leticia Labriola, Martin R. Larsen, Claudio R. F. Marinho, and Giuseppe Palmisano
- 200 **Integrated Succinylome and Metabolome Profiling Reveals Crucial Role of S-Ribosylhomocysteine Lyase in Quorum Sensing and Metabolism of *Aeromonas hydrophila***  
Zujie Yao, Zhuang Guo, Yuqian Wang, Wanxin Li, Yuying Fu, Yuexu Lin, Wenxiong Lin, and Xiangmin Lin
- 216 **Integrative Proteomic and Phosphoproteomic Profiling of Testis from Wip1 Phosphatase-Knockout Mice: Insights into Mechanisms of Reduced Fertility**  
Yinghui Wei, Qian Gao, Pengxia Niu, Kui Xu, Yiqing Qiu, Yanqing Hu, Shasha Liu, Xue Zhang, Miaoying Yu, Zhiguo Liu, Bingyuan Wang, Yulian Mu, and Kui Li
- 231 **Common Metabolic Pathways Implicated in Resistance to Chemotherapy Point to a Key Mitochondrial Role in Breast Cancer**  
Etna Abad, Yoelsis García-Mayea, Cristina Mir, David Sebastian, Antonio Zorzano, David Potesil, Zbynek Zdrahal, Alex Lyakhovich, and Matilde E. Leonart
- 245 **Identification of a Specific Translational Machinery via TCTP-EF1A2 Interaction Regulating NF1-associated Tumor Growth by Affinity Purification and Data-independent Mass Spectrometry Acquisition (AP-DIA)**  
Daiki Kobayashi, Takaho Tokuda, Kyosuke Sato, Hiroki Okanishi, Megumi Nagayama, Mio Hirayama-Kurogi, Sumio Ohtsuki, and Norie Araki
- 263 **Characterization of Proteome Variation During Modern Maize Breeding**  
Lu-Guang Jiang, Bo Li, Sheng-Xue Liu, Hong-Wei Wang, Cui-Ping Li, Shu-Hui Song, Mary Beatty, Gina Zastrow-Hayes, Xiao-Hong Yang, Feng Qin, and Yan He
- 277 **Assembly of the  $\beta$ 4-Integrin Interactome Based on Proximal Biotinylation in the Presence and Absence of Heterodimerization**  
Satu-Marja Myllymäki, Kämäräinen Ulla-Reetta, Liu Xiaonan, Cruz Sara Pereira, Miettinen Sini, Vuorela Mikko, Varjosalo Markku, and Manninen Aki
- 294 **Proteomic Analysis of Baboon Cerebral Artery Reveals Potential Pathways of Damage by Prenatal Alcohol Exposure**  
Shivantika Bisen, David Kakhniashvili, Daniel L. Johnson, and Anna N. Bukiya

Both cancer resistant and cancer stem cells display an enrichment of proteins from metabolic pathways that not only suggests their dependence on mitochondria for survival but also proposes common strategy for anticancer therapy (on the top). In turn, bactericidal antibiotics target mitochondria and activate autophagy (in the center). Here, we provide the first *in vivo* evidence demonstrating that antibiotic linezolid in combination with autophagy blocker decreased tumor growth (in the bottom left corner). For details, see the article by Abad *et al.*, pages 231–244.

- 308 **Proteome-wide Analysis of Protein Thermal Stability in the Model Higher Plant *Arabidopsis thaliana***  
[S] *Jeremy D. Volkening, Kelly E. Stecker, and Michael R. Sussman*
- 320 **Human Stress-inducible Hsp70 Has a High Propensity to Form ATP-dependent Antiparallel Dimers That Are Differentially Regulated by Cochaperone Binding**  
[S] *Filip Trcka, Michal Durech, Pavla Vankova, Josef Chmelik, Veronika Martinkova, Jiri Hausner, Alan Kadek, Julien Marcoux, Tomas Klumpler, Borivoj Vojtesek, Petr Muller, and Petr Man*
- 338 **Identification of TEX101-associated Proteins Through Proteomic Measurement of Human Spermatozoa Homozygous for the Missense Variant rs35033974**  
[S] *Christina Schiza, Dimitrios Korbakis, Keith Jarvi, Eleftherios P. Diamandis, and Andrei P. Drabovich*
- 352 **Carcinogenic *Helicobacter pylori* Strains Selectively Dysregulate the *In Vivo* Gastric Proteome, Which May Be Associated with Stomach Cancer Progression**  
[S] *Jennifer M. Noto, Kristie L. Rose, Amanda J. Hachey, Alberto G. Delgado, Judith Romero-Gallo, Lydia E. Wroblewski, Barbara G. Schneider, Shailja C. Shah, Timothy L. Cover, Keith T. Wilson, Dawn A. Israel, Juan Carlos Roa, Kevin L. Schey, Yana Zavros, M. Blanca Piazuolo, and Richard M. Peek Jr.*
- 372 **Surface Loops in a Single SH2 Domain Are Capable of Encoding the Spectrum of Specificity of the SH2 Family**  
[S] *Huadong Liu, Haiming Huang, Courtney Voss, Tomonori Kaneko, Wen Tao Qin, Sachdev Sidhu, and Shawn S.-C. Li*

## Technological Innovation and Resources

- 383 **FlashPack: Fast and Simple Preparation of Ultrahigh-performance Capillary Columns for LC-MS**  
[S] *Sergey I. Kovalchuk, Ole N. Jensen, and Adelina Rogowska-Wrzesinska*
- 391 **PTMiner: Localization and Quality Control of Protein Modifications Detected in an Open Search and Its Application to Comprehensive Post-translational Modification Characterization in Human Proteome**  
[S] *Zhiwu An, Linhui Zhai, Wantao Ying, Xiaohong Qian, Fuzhou Gong, Minjia Tan, and Yan Fu*

## AUTHOR INDEX

- Abad, Etna, 231  
Aki, Manninen, 277  
An, Zhiwu, 391  
Araki, Norie, 245
- Bandeira, Carla Letícia, 182  
Beatty, Mary, 263  
Bisen, Shivantika, 294  
Blanca Piazuelo, M., 352  
Bukiya, Anna N., 294
- Carlos Roa, Juan, 352  
Chmelik, Josef, 320  
Cover, Timothy L., 352
- Da Fonseca, Micaella Pereira, 182  
Delgado, Alberto G., 352  
Diamandis, Eleftherios P., 338  
Dombrowski, Jamille G., 182  
dos Santos, Ancély Ferreira, 182  
Drabovich, Andrei P., 338  
Durech, Michal, 320
- Festuccia, William T., 182  
Fu, Yan, 391  
Fu, Yuying, 200
- Gao, Qian, 216  
García-Mayea, Yoelsis, 231  
Gong, Fuzhou, 391  
Guo, Zhuang, 200
- Hachey, Amanda J., 352  
Hamada, Mayako, 169  
Hausner, Jiri, 320  
He, Yan, 263  
Hirayama-Kurogi, Mio, 245  
Huang, Haiming, 372  
Hu, Yanqing, 216
- Israel, Dawn A., 352
- Jarvi, Keith, 338  
Jensen, Ole N., 383  
Jiang, Lu-Guang, 263  
Johnson, Daniel L., 294
- Kadek, Alan, 320  
Kakhniashvili, David, 294  
Kaneko, Tomonori, 372  
Kawahara, Rebeca, 182  
Klumpler, Tomas, 320  
Kobayashi, Daiki, 245  
Korbakis, Dimitrios, 338  
Kovalchuk, Sergey I., 383
- Labriola, Leticia, 182  
Larsen, Martin R., 182  
Lin, Wenxiong, 200  
Lin, Xiangmin, 200  
Lin, Yuexu, 200  
Liu, Huadong, 372  
Liu, Shasha, 216  
Liu, Sheng-Xue, 263  
Liu, Zhiguo, 216  
Li, Bo, 263  
Li, Cui-Ping, 263  
Li, Kui, 216  
Li, Shawn S.-C., 372  
Li, Wanxin, 200  
Leonart, Matilde E., 231  
Lyakhovich, Alex, 231
- Man, Petr, 320  
Marcoux, Julien, 320  
Marinho, Claudio R. F., 182  
Markku, Varjosalo, 277  
Martinkova, Veronika, 320  
Mikko, Vuorela, 277  
Mir, Cristina, 231  
Muller, Petr, 320  
Mu, Yulian, 216  
Mylymäki, Satu-Marja, 277
- Nagayama, Megumi, 245  
Niu, Pengxia, 216  
Noto, Jennifer M., 352
- Ohta, Shinya, 169  
Ohtsuki, Sumio, 245  
Okanishi, Hiroki, 245
- Palmisano, Giuseppe, 182  
Peek Jr., Richard M., 352  
Pereira, Cruz Sara, 277  
Potesil, David, 231
- Qian, Xiaohong, 391  
Qin, Feng, 263  
Qin, Wen Tao, 372  
Qiu, Yiqing, 216
- Rappsilber, Juri, 169  
Romero-Gallo, Judith, 352  
Rogowska-Wrzesinska, Adelina, 383  
Rosa-Fernandes, Livia, 182  
Rose, Kristie L., 352
- Sato, Kyosuke, 245  
Sato, Nobuko, 169  
Schey, Kevin L., 352

Schiza, Christina, 338  
Schneider, Barbara G., 352  
Sebastian, David, 231  
Shah, Shailja C., 352  
Sidhu, Sachdev, 372  
Sini, Miettinen, 277  
Song, Shu-Hui, 263  
Souza, Rodrigo M., 182  
Stecker, Kelly E., 308  
Sussman, Michael R., 308

Taniguchi, Hisaaki, 169  
Taniguchi, Takako, 169  
Tan, Minjia, 391  
Tokuda, Takaho, 245  
Trcka, Filip, 320

Ulla-Reetta, Kämäräinen, 277

Vankova, Pavla, 320  
Vojtesek, Borivoj, 320  
Volkening, Jeremy D., 308

Voss, Courtney, 372

Wang, Bingyuan, 216  
Wang, Hong-Wei, 263  
Wang, Yuqian, 200  
Wei, Yinghui, 216  
Wilson, Keith T., 352  
Wroblewski, Lydia E., 352

Xiaonan, Liu, 277  
Xu, Kui, 216

Yang, Xiao-Hong, 263  
Yao, Zujie, 200  
Ying, Wantao, 391  
Yu, Miaoying, 216

Zastrow-Hayes, Gina, 263  
Zavros, Yana, 352  
Zdrahal, Zbynek, 231  
Zhai, Linhui, 391  
Zhang, Xue, 216  
Zorzano, Antonio, 231